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UROLOGICAL SURVEY

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STONE DISEASE

Miniperc? No, Thank You!

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Objectives: The aim of this retrospective study was to evaluate the results of our miniperc series through comparison with results from standard percutaneous nephrolithotomy (PNL) and tubeless PNL series in the treatment of stones < 2cm in diameter.
Patients and Methods: A total of 134 percutaneous treatments were performed for renal stones < 2cm in diameter. Among the treatments, 40 were minipercs, 67 were standard PNLs, and 27 were tubeless PNLs.
Results: Miniperc operative time was longer than that of standard PNL (155.5 vs 106.6 min, respectively) and tubeless PNL (95.9min). Conversely, there was an advantage for miniperc over standard PNL in terms of a significantly reduced hematocrit drop (4.49% vs 6.31%). No miniperc patients required blood transfusions, whereas two did in the standard PNL group and one in the tubeless PNL group. There was no statistical difference in terms of the amount of analgesics between the standard PNL and miniperc groups, although this difference was statistically significant between the miniperc and tubeless PNL groups (73.8 vs 41.1 mg, respectively). Hospitalization for the miniperc group was shorter than that required by the standard PNL group (3.05 vs 5.07 days), but tubeless PNL offered the best result (2.18 days). The stone-free rate was 100% in the tubeless PNL group, 94% in the standard PNL group, and 77.5% in the miniperc group.
Conclusions: Our retrospective study failed to demonstrate significant advantages of the miniperc technique. As such, we no longer perform miniperc but instead use tubeless PNL when possible.

Editorial Comment

As an early proponent of a mini-PCNL, the main advantage I anticipated with a mini-PCNL was a decrease in blood loss. Indeed, this hypothesis is supported by the current study. As it stands, decrease in blood loss would be an outcome worth striving for, yet not at the expense of lower stone-free rates. Improvements in instrumentation, in particular smaller ultrasonic devices, are needed to help raise the success rate of mini-PCNL to the expected standard. The issue of pain post-PCNL will be decided more by the size of tube than the size of tract - many studies now support the use of a small-bore or tubeless approach to minimize this aspect of PCNL-associated morbidity. As such, one might rephrase the title from “No, Thank You” to “Not Yet”. If the future brings improvement in instrumentation, one might anticipate that a tubeless mini-PCNL may resurface.

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Acute Effects of Percutaneous Tract Dilation on Renal Function and Structure

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J Endourol. 2006; 20: 1030-40

Background: Percutaneous nephrolithotomy (PCNL) is performed on a routine basis for the rapid and efficient removal of large caliceal stones. After percutaneous puncture, rigid dilators or an inflatable balloon are used to dilate the nephrostomy tract to allow access to the collecting system for stone removal. Little is known of the acute impact of tract dilation procedures on renal function.
Materials and Methods: We compared renal hemodynamic and excretory function in female pigs immediately before and up to 5 hours after percutaneous nephrostomy (PCN) using sequential Amplatz dilators (N = 8) or Nephromax balloon inflation (N = 7) and control pigs with no PCN access (N = 8). We also examined renal function in patients undergoing PCNL.
Results: The two PCN procedures produced a renal lesion of comparable size and morphology, as well as similar changes in renal function. Glomerular filtration rate (GFR), renal plasma flow (RPF), and urinary sodium excretion (U(Na)V) were significantly reduced in Amplatz- and Nephromax-treated kidneys throughout the 5-hour observation period, by about 50%, 60%, and 80%, respectively. In control pigs, GFR and RPF remained stable and U(Na)V declined progressively to about 50% of baseline over the course of the experiment. The contralateral kidney showed changes in renal function similar to those in the PCN-treated or control kidney in all three groups. A retrospective analysis of 196 adults with normal renal function who underwent unilateral PCNL using the Nephromax balloon dilator revealed a significant increase in serum creatinine of 0.14 mg/dL at 1 day.
Conclusion: Both animal and human studies show that PCN is associated with an acute decline in renal function.

Editorial Comment
This study raises concern regarding transient decrease in ipsilateral and contralateral renal function during PCNL. The authors did not have a control group where percutaneous access was gained with a puncture needle, but the tract was not dilated. Such a group would help delineate whether the insult to the kidney leading to hemodynamic and functional changes is the percutaneous access or tract dilation. Renal obstruction may have confounded the results obtained during the evaluation period - it is possible that the 8F Cope catheter and ureter may have been blocked by clots associated with the tract dilation. Indeed the authors report a marked decrease in urine output in these animals, with 2 animals experiencing complete cessation of urine formation from the treated kidney. Future studies evaluating the relative changes in function with regards to maximum diameter of tract dilation may help support or refute the concept of a mini-PCNL. As such, these findings are critical for the practicing urologist to appreciate, as the impact on ipsilateral and contralateral renal filtration, perfusion and excretory function suggests a need to monitor the use of nephrotoxic medications, such as ketorolac or gentamycin, during the immediate post-PCNL period.

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ENDOUROLOGY & LAPAROSCOPY

Preoperative and Intraoperative Risk Factors for Side-Specific Positive Surgical Margins in Laparoscopic Radical Prostatectomy for Prostate Cancer

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Objectives: Identification of variables predicting positive surgical margins (PSMs) in patients undergoing laparoscopic radical prostatectomy (LRP) for clinically localized prostate cancer is lacking. Our objective was to determine preoperative risk factors and the association of ipsilateral degree of neurovascular bundle dissection (intraoperative factor) with side-specific PSMs in these patients.
Material and Methods: Between October 2002 and April 2005, one surgeon performed LRP on 407 previously untreated patients. Of 814 evaluable prostate sides, 728 harboured prostate cancer in the specimen and composed the study population. For each prostate side, we obtained clinical stage, biopsy Gleason, maximum percentage of tumour in the biopsy, suspected extracapsular extension (ECE) on endorectal coil magnetic resonance imaging (MRI), degree of neurovascular bundle (NVB) dissection, and PSMs. PSM was defined as cancer cells at the inked margins. Logistic regression analyses with random effects were generated.
Results: Of the 728 prostate sides with cancer, 51 (7%) had at least one PSM. In multivariable analysis, higher PSA (p=0.01), Gleason score of 7 compared with </=6 in the biopsy (p=0.04), lower prostate volume on MRI (p=0.01), and interfascial NVB dissection compared with intrafascial dissection (p=0.01) were associated with an increased risk of side-specific PSMs. Suspected ECE on MRI (p=0.9) and clinical stage (p=0.3) were not significantly associated with side-specific PSMs. A subset analysis of 321 patients with bilateral tumours did not show statistically significant differences in PSMs according to tumour side (p=0.3).
Conclusions: High serum prostate-specific antigen, biopsy Gleason score of 7, low prostate volume, and interfascial NVB dissection were independently associated with side-specific PSMs after LRP, and should be considered during planning of the LRP surgical strategy.

Editorial Comment
Preoperative PSA, clinical stage, and biopsy Gleason score can predict positive surgical margins preoperatively. Furthermore, a positive surgical margin has been shown to be associated with biochemical recurrence rates up to 50% at 10 years after radical prostatectomy. The authors present their experience in improving the surgical technique to optimize clinical outcome and survival. Their conclusion states that neurovascular bundle preservation is not a risk factor for increase rates of positive margins when the technique is applied adequately in selected patients. Other factors such as elevated serum PSA (> 10 ng/mL), small glands (< 30 g), biopsy Gleason scores of 7, degree of neurovascular bundle dissection, and presence of bulky disease should be considered by laparoscopic surgeons when planning the operation to decrease the incidence of positive surgical margins.

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Limitations of Laparoscopy for Bilateral Nephrectomy for Autosomal Dominant Polycystic Kidney Disease

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Purpose: We retrospectively studied outcomes following bilateral hand assisted laparoscopic nephrectomy.
Materials and Methods: We retrospectively reviewed the charts of 18 patients with symptomatic autosomal dominant polycystic kidney disease who underwent bilateral hand assisted laparoscopic nephrectomy.

Preoperative radiographic imaging was reviewed retrospectively to determine kidney size based on an ellipsoid shape. A visual analog pain scale with scores of 0 to 10 to assess pain related to autosomal dominant polycystic kidney disease was measured preoperatively and postoperatively.
Results: Average patient age was 48.2 years (range 30 to 64). Of the patients 14 successfully underwent bilateral hand assisted laparoscopic nephrectomy, while 4 required open conversion. A total of 16 patients underwent nephrectomy for pain and 2 underwent surgery for frequent recurrent symptomatic urinary tract infections. All patients except 1 underwent renal transplantation before bilateral nephrectomy. There was a significant difference in the volume of the right and left kidneys between the hand assisted laparoscopic and open groups (mean +/- SD 1,043 +/- 672 and 1,058 +/- 603.8 vs 4,052 +/- 548 and 3,592 +/- 1,752 cm (3), $p < 0.001$ and 0.06 respectively). There were 5 complications, including wound infection and protracted ileus in 2 patients each, and incisional hernia in 1. In addition, the difference in mean preoperative and postoperative visual analog pain scores was statistically significant (6.9, range 3 to 10 and 0.5, range 0 to 2, $p < 0.05$).
Conclusions: Bilateral laparoscopic hand assisted nephrectomy is a safe and reliable option in patients requiring removal of the 2 kidneys in a single setting. Rather than performing staged nephrectomies, hand assisted laparoscopic nephrectomy allows the single administration of general anesthesia and provides effective relief of bothersome symptoms in patients with symptomatic autosomal dominant polycystic kidney disease. This procedure is safe in patients with renal transplants. Patients with massive polycystic kidneys with a kidney volume of greater than 3,500 cc are at increased risk for open conversion and they may have improved outcomes if open nephrectomy is attempted from the outset.

Editorial Comment
The new era of minimally invasive surgery demonstrates the feasibility of bilateral nephrectomies performed laparoscopically. There are no more questions that patients recover faster with better outcomes than the open counterpart is. Moreover, this less invasive approach allows patients to undergo 2 procedures in one setting providing innumerous benefits to patients that in the past had to experience staged operations. The authors demonstrated limitations to the technique when the polycystic kidneys are massively large decreasing the working space.

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IMAGING

Conscious Sedation Reduces Distress in Children Undergoing Voiding Cystourethrography and Does Not Interfere With the Diagnosis of Vesicoureteric Reflux: A Randomized Controlled Study

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Objective: Voiding cystourethrography (VCU) is a distressing procedure for children. Conscious sedation using oral midazolam may reduce this distress, but its use may also alter the ability of the VCU to show vesicoureteric reflux (VUR). The objectives of our study were to assess the effectiveness of conscious sedation using oral midazolam when administered routinely in children undergoing VCU and to ensure that conscious sedation using oral midazolam does not alter the ability of VCU to show VUR.

Subjects and Methods: Our study was a randomized double-blind controlled trial performed at a university teaching hospital; our study group consisted of children over the age of 1 year who been referred for their first VCU examination from July 2001 to July 2003. Participants were randomized to receive a placebo or midazolam syrup (0.5 mg/kg) before the examination. The primary outcome measures were the Groningen Distress Rating Scale (GDRS) and grading of VUR, as defined by the international grading system established by the International Reflux Study Group.
Results: There were no serious adverse events. One hundred thirty-nine children were randomized in the study, and 117 underwent complete assessment. Eight who underwent VCU after the study day were included in a "complete case" intention-to-treat analysis. In the placebo group, 34 children (61%) experienced serious distress or severe distress (GDRS score, 3 or 4). In the midazolam group, 16 children (26%) experienced the same degree of distress. There was a significant difference between the GDRS scores (nonlinear mixed-model analysis, $p < 0.001$) of the two study groups. The number needed to treat to reduce serious or severe distress in one child was 2.9 (95% CI, 1.9-5.5). VUR was identified in 16% of all children. There was no difference in VUR grading between the groups (nonlinear mixed-model analysis, $p = 0.31$).
Conclusion: Routine use of oral midazolam (0.5 mg/kg) for conscious sedation of children undergoing VCU reduces distress and does not alter the ability of VCU to show VUR well enough to allow diagnosis.

Editorial Comment

In children, the voiding cystourethrogram (VCUG) although a stressful experience for patients and their parents, is an exam relatively easy to perform by an experienced radiologist. Usually no preparation is needed for children; no cleansing enema, fasting or anesthesia is required. In fact, up to now, the vast majority of radiologists prefers to perform this examination when the child is awake. In selected group of children, particularly those who are excessively frightened (previous VCUG), oral midazolam has been used sporadically in order to reduce anxiety and produce antegrade amnesia (1). In 2003, a randomized double blind study (oral midazolam and placebo) performed in 95 children showed that there was no difference in frequency or grade of vesicoureteric reflux or bladder emptying between the two groups of patients(2). We must emphasize that good results has been obtained only with oral midazolan and not with other drugs. Recent study showed that children who underwent VCUG with sedation using propofol were less likely to void to completion thus impairing the ability to accurately detect vesicoureteral reflux (3).

The authors of this important study clearly shows that sedation with midazolam facilitates the performance of VCUG in children above 1 year of age, with no impairment in the capacity of detect vesicoureteric reflux. We believe that sedation with oral midazolam should be routinely used in children candidate for VCUG examination since it reduce the stress and has no negative effect on the outcome of the examination.

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Surgically Relevant Normal and Variant Renal Parenchymal and Vascular Anatomy In Preoperative 16-MDCT Evaluation of Potential Laparoscopic Renal Donors

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Objective: Using 16-MDCT, we describe and quantify the frequency and types of renal anatomic variants and findings relevant for preoperative evaluation and surgical planning for potential laparoscopic renal donors.
Materials and Methods: On 16-MDCT, 126 consecutive potential donors underwent scanning before contrast administration and after i.v. power injection of nonionic contrast material during the arterial, nephrographic, and excretory phases. On a 3D workstation, CT images were evaluated retrospectively in consensus by three abdominal imagers. The number and branching pattern of bilateral renal arteries and veins, including anomalies of the inferior vena cava and lumbar-gonadal axis, were categorized along with the frequency of incidental findings of the renal parenchyma and collecting system.
Results: Major arterial variants including supernumerary and early branching arteries were present in 16% and 21%, respectively, of left kidneys and 22% and 15%, respectively, of right kidneys. Major and minor venous variants were detected in 11% and 58% of left kidneys and 24% and 3% of right kidneys. Late confluence of the venous trunk was identified in 17% of left kidneys and 10% of right kidneys. Incidental parenchymal and urothelial abnormalities, most commonly cysts and calyceal calcifications, were identified in 30% of the kidneys. Other relevant incidental findings included focal infarcts, cortical scars, atrophic scarred kidney, and bilateral papillary necrosis. Urothelial variants included bilateral simple ureteroceles and rightsided complete duplicated collecting system.
Conclusion: 16-MDCT angiography and urography allow confident detection and classification of a variety of anatomic and incidental anomalies relevant to the preoperative selection of potential laparoscopic renal donors and to surgical planning.

Editorial Comment

In most transplantation centers, multi–detector row computed tomography (MDCT), is used as the sole imaging technique in the preoperative evaluation of living renal donors. With 16-row-MDCT an increased number of simultaneously acquired slices and sub-millimeter collimation allows a near isotropic scanning with high spatial resolution thus providing exquisite multiplanar reconstructions of the kidneys and the vascular anatomy.

The authors nicely show the value of 16-row-MDCT for the preoperative knowledge of renal vascular, parenchymal and urothelial anatomy and their importance for donor and kidney selection. 16-row-MDCT angiography and urography, enabled excellent preoperative information, which are essential since it helps laparoscopic surgeons to anticipate variant anatomy intraoperatively and avoid potential donor complications.

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UROGENITAL TRAUMA

Predicting Urethral Injury from Pelvic Fracture Patterns in Male Patients with Blunt Trauma

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Purpose: Precise definition of pelvic fracture location may enable prediction of which subjects are at risk for urethral injury and understanding of the pathophysiological mechanism of injury. We determined the specific anterior pelvic injury locations associated with urethral injury.
Materials and Methods: We completed a retrospective, nested case-control study of 119 male patients evaluated at a single large level 1 trauma center between January 1, 1997 and July 15, 2003. We performed detailed measurements of the location, displacement and direction of force of each anterior pelvic fracture from computerized tomography and pelvic radiographs. Multiple logistic regression was used to determine associations between specific fracture locations and urethral injury after controlling for age, injury mechanism, injury severity and direction of force.
Results: Urethral injury was present in 25 patients and all had anterior pelvic fracture (inclusive of pubic symphysis diastasis). There were no urethral injuries in patients with fractures isolated to the acetabulum. Pelvic fractures that were independently associated with urethral injury from multiple regression analysis included displaced fractures of the inferomedial pubic bone, OR 6.4 (95% CI 1.6 to 24.9), and symphysis pubis diastasis, OR 11.8 (95% CI 4.0 to 34.5). Each millimeter of symphysis pubis diastasis or inferomedial pubic bone fracture displacement was associated with an approximately 10% increased risk of urethral injury.
Conclusions: The location and displacement of anterior pelvic fractures in males predict risk of urethral injury and may be valuable in determining when evaluation of the urethra is appropriate.

Editorial Comment

This study adds to the body of literature that demonstrates that urethral injury associated with pelvic fracture, typically occurs when the anterior pelvic arch is disrupted that results in symphysis diastasis and displaced pubic rami fractures. The biomechanics of urethral injury as originally described by Turner-Warwick felt that the disruption was prostatomembranous, with the prostate displaced from the fixed urogenital diaphragm. Over time, however, it has been recognized that many injuries are rather to the bulbo-membranous junction, and not at the prostate level. Prior to this study the most commonly sited paper was by Koraitim (ref. 10 in article) where the highest odds ratios for urethral injury were with straddle injury and SI fracture. A paper correlating fracture by the Young-Burgess or Tile classification and urethral injury would have been nice.

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Accuracy of Trauma Ultrasound in Major Pelvic Injury

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J Trauma. 2006; 61: 1453-7

Background: Trauma ultrasound (US) utilizing the focused assessment with sonography in trauma (FAST) is often performed to detect traumatic free peritoneal fluid (FPF). Yet its accuracy is unclear in certain trauma subgroups such as those with major pelvic fractures whose emergent diagnostic and therapeutic needs are unique. We hypothesized that in patients with major pelvic injury (MPI) trauma ultrasound would perform with lower accuracy than has previously been reported.
Methods: Retrospective analysis of adult trauma patients with pelvic fractures seen at an urban Level I emergency department and trauma center. Patients were identified from the institutional trauma registry and ultrasound database from 1999 to 2003. All patients aged > 16 years with MPI (Tile classification A2, all type B and C pelvic fractures, and type C acetabular fractures determined by a blinded orthopedic traumatologist) and who had a trauma US performed during the initial emergency department evaluation were included. All ultrasounds were performed by emergency physicians or surgeons using the four-quadrant FAST evaluation. Results of US were compared with one of three reference standards: abdominal/pelvic computed tomography, diagnostic peritoneal tap, or exploratory laparotomy. Two-by-two tables were constructed for diagnostic indices.
Results: In all, 96 patients were eligible; 9 were excluded for indeterminate ultrasound results. Of the remaining 87 patients, the pelvic fracture types were distributed as follows: 9% type A2, 72% type B, 16% type C, and 3% type C acetabular fractures. Overall US sensitivity for detection of FPF was 80.8%, specificity was 86.9%, positive predictive value was 72.4%, and negative predictive value was 91.4%. Categorization of sensitivity according to pelvic ring fracture type is as follows: type A2 fractures: sensitivity and specificity, 75.0%; type B fractures: sensitivity, 73.3%, specificity, 85.1%; and type C fractures (pelvis and acetabulum): sensitivity and specificity, 100%. Of the true-positive US results, blood was the FPF in 16 of 21 (76%) and urine from intraperitoneal bladder rupture in 4 in 21 (19%) patients.
Conclusion: US in the initial evaluation of traumatic peritoneal fluid in major pelvic injury patients has lower sensitivity and specificity than previously reported for blunt trauma patients. Additionally, uroperitoneum comprises a substantial proportion of traumatic free peritoneal fluid in patients with MPI.

Editorial Comment
The true value of FAST is in the evaluation for blood in the pericardial sac, hepatorenal fossa, splenorenal fossa, and the pelvis. One limitation of FAST is its inability to distinguish between a urine leak and blood. Overall, FAST is a quick and easy way to determine the source of bleeding in an unstable patient — from the chest, the abdomen or the pelvis.

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PATHOLOGY

Spindle Cell Lesions of the Adult Prostate

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Prostatic spindle cell lesions are diagnostically challenging and encompass a broad array of benign and malignant processes. A subset of these lesions arises only within the prostate and generally represents entities

that originate from the prostate epithelium or stroma, such as sclerosing adenosis, sarcomatoid carcinoma, stromal tumors of uncertain malignant potential (STUMP), and stromal sarcoma. Another subset of spindle cell tumors that involve the prostate are also found at other sites and include solitary fibrous tumor, leiomyosarcoma, and neural lesions among others. Finally, tumors may secondarily involve the prostate yet present as primary prostatic processes, as is evident with several cases of gastrointestinal stromal tumors (GIST). The utility of ancillary studies, including immunohistochemistry, is often limited and the main criteria for diagnosis are the morphologic findings by routine H&E stain. This review addresses the various entities that may present as spindle cell tumors within the adult prostate and discusses the functional aspects of the differential diagnosis of these lesions.

Editorial Comment

Spindle cell lesions are rare in the prostate. Among these lesions is worth commenting for the urologists sarcomatoid carcinoma and the lesions proposed by the authors to be called STUMP. There is a lot of debate in the literature about the terms sarcomatoid carcinoma vs. carcinosarcoma. These terms apply to tumors that show spindling of the cells sometimes with heterologous differentiation like osteosarcoma, condrosarcoma, angiosarcoma and others. There is a tendency to call these cases sarcomatoid carcinoma with heterologous differentiation based on studies that show a monoclonal origin for these tumors.

Stromal tumors of uncertain malignant potential (called by the authors STUMP) encompass a group of lesions that most of the times are hard to establish histologically the biological behavior in contrast to frankly sarcomatous lesions like leiomiosarcoma, rabdomiosarcoma and others. STUMP includes several patterns of lesions originating from the specialized stroma of the prostate: phyllodes tumor of the prostate, hypercellular stroma with scattered atypical yet degenerative cells, and extensive overgrowth of hypercellular stroma with the histology of a stromal nodule (1). STUMPS are considered neoplastic, based on the observations that they may diffusely infiltrate the prostate gland and extent into adjacent tissues, and often recur. Although most cases of STUMP do not behave in an aggressive fashion, occasional cases have been documented to recur rapidly after resection and a minority has progressed to stroma sarcoma.

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Inflammatory Myofibroblastic Tumors of the Urinary Tract: A Clinicopathologic Study of 46 Cases, Including a Malignant Example Inflammatory Fibrosarcoma and a Subset Associated With High-Grade Urothelial Carcinoma

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Inflammatory myofibroblastic tumor (IMT) of the urinary tract, also termed postoperative spindle cell nodule, inflammatory pseudotumor, and pseudosarcomatous fibromyxoid tumor, is rare and in the past was believed to reflect diverse entities. We reviewed a series of 46 IMTs arising in the ureter, bladder, and prostate, derived primarily from a large consultation practice. There were 30 male and 16 females aged 3 to 89 years (mean 53.6). Lesions were 1.2 to 12 cm (mean 4.2). There was a history of recent prior instrumentation in 8 cases. Morphology was similar to that previously described for IMT occurring in this region, with the exception of 1 case that focally appeared sarcomatous. Polypoid cystitis coexisted in 5 patients (11%). Mitoses were typically scant (0 to 20/10 hpf, mean 1). Necrosis was seen in 14 (30%) cases. Invasion of the muscularis propria was documented in 19 (41%). By immunohistochemistry (IHC), lesions at least focally expressed anaplastic lymphoma kinase (ALK) (20/35, 57%), AE1/3 (25/34, 73%), CAM5.2 (10/15, 67%), CK18 (6/6, 100%), actin (23/25, 92%), desmin (15/19, 79%), calponin (6/7, 86%), caldesmon (4/7, 57%, rare cells), p53 (10/13, 77%), and most lacked S100 (0/14), CD34 (0/13), CD117 (2/13, 15%), CD21 (0/5), and CD23 (0/3). ALK gene alterations were detected by fluorescence in situ hybridization (FISH) in 13/18 (72%) tested cases, including 2 with prior instrumentation; 13/18 (72%) showed agreement between FISH ALK results and ALK protein results by IHC. Most bladder IMTs were managed locally, but partial cystectomy was performed as the initial management in 7 cases and cystectomy in 1 (1 IMT was initially misinterpreted as carcinoma, 1 IMT was found incidentally as a separate lesion in a cystectomy specimen performed for urothelial carcinoma). Follow-up was available in 32 cases (range 3 to 120 mo; mean 33; median 24). There were 10 patients with recurrences (2 with 2 recurrences). Recurrences were unassociated with muscle invasion or with ALK alterations. In 2 cases, tumors of the urinary tract (TURs) showing IMT preceded (1 and 2 mo, respectively) TURs showing sarcomatoid carcinoma with high-grade invasive urothelial carcinoma accompanied with separate fragments of IMT. Even on re-review the IMT in these 2 cases were morphologically indistinguishable from other cases of IMT, with FISH demonstrating ALK alterations in the IMT areas in one of them. Both these patients died of their carcinomas. Lastly, there was 1 tumor with many morphological features of IMT and an ALK rearrangement, yet overtly sarcomatous. This case arose postirradiation for prostate cancer 4 years before the development of the lesion, with tumor recurrence at 4 months and death from intra-abdominal metastatic disease at 9 months. In summary, urinary tract IMTs are rare and share many features with counterparts in other sites, displaying similar morphology and immunogenotypic features whether de novo or postinstrumentation. Typical IMTs can be locally aggressive, sometimes requiring radical surgical resection, but none of our typical cases metastasized, although they can rarely arise contemporaneously with sarcomatoid urothelial carcinomas. For these reasons, close follow-up is warranted.

Editorial Comment

It is controversial in the literature whether inflammatory myofibroblastic tumor of the urinary tract is an inflammatory or a neoplastic lesion. This is the reason for the vast list of synonyms: reactive pseudosarcomatous response, postoperative spindle cell nodule, inflammatory pseudotumor, nodular fasciitis, pseudomalignant spindle cell proliferation, pseudosarcomatous myofibroblastic proliferation, pseudosarcomatous myofibroblastic tumor, and inflammatory myofibroblatic tumor.

The lesion mimics both sarcomas and spindled carcinomas, the latter compounded by their expression of various cytokeratins (1). Considering that the lesion in the urinary tract has been benign in almost all series it would be similar to nodular fasciitis elsewhere. However, it differs by nodular fasciitis in its capacity to infiltrate deeply into the detrusor muscle (2).

The identification of ALK alterations in bladder lesions suggests that, despite the frequent similarity to nodular fasciitis, inflammatory myofibroblastic tumor is neoplastic (3). There is a clonal aberration typically involving chromosome 2p. This results in rearrangement of the ALK gene which codifies a receptor of tyrosine-kinase and hence over-expression of ALK-1 protein. This over-expression of the ALK protein is also seen in anaplastic large cell lymphomas.

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INVESTIGATIVE UROLOGY

Testicular Volume Measurement: Comparison of Ultrasonography, Orchidometry, and Water Displacement

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Urology. 2007; 69: 152-7

Objectives: To determine the accuracy of orchidometry and ultrasonography for measuring the testicular volume by comparing the resultant measurements with the actual testicular volume in humans.
Methods: The testicular volume of 40 testes from 20 patients with prostate cancer (mean age +/- SD 74.5 +/- 7.5 years) was measured using the Prader orchidometer and ultrasonography before therapeutic bilateral orchiectomy. The ultrasound measurements of testicular volume were calculated using three formulas: length (L) x width (W) x height (H) x 0.52, L x W2 x 0.52, and L x W x H x 0.71. The actual testicular volumes were determined by water displacement of the surgical specimen.
Results: The mean actual testicular volume of the 40 testes was 9.3 cm3 (range 2.5 to 23.0). A strong correlation was found between the testicular volume calculated by the three ultrasound formulas and the actual volume (r = 0.910 to 0.965, P <0.0001) and was stronger than the correlation with the Prader orchidometer (r = 0.818, P <0.0001). The smallest mean difference from the actual testicular volume was observed with the formula L x W x H x 0.71, which overestimated the actual volume by 0.80 cm3 (7.42%). The measurements using the Prader orchidometer correlated with the actual testicular volume and with the testicular volume calculated using the three ultrasound formulas (r = 0.801 to 0.816, P <0.0001). However, the orchidometer measurements had the largest mean difference from the actual testicular volume (6.68 cm3, 81.7%).
Conclusions: The results of this study have shown that measuring the testicular volume by ultrasonography is more accurate than by the Prader orchidometer, and the formula L x W x H x 0.71 was the most accurate for calculating the testicular volume.

Editorial Comment
This is a straightforward research work, which objectively demonstrates that ultrasonographic evaluation of testicular volume is accurate. The authors compared ultrasound evaluation by the ellipsoid volume formula (2

methods), a variation of the ellipsoid formula and orchidometry, with water displacement, that is the real volume (Laplace principle). Although the classical ellipsoid volume formula used in ultrasound equipment is accurate, the authors demonstrated that the best formula is a variant of the ellipsoid formula, called the Lambert empiric formula (V = Length × Width × Height × 0.71).

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Immediate Improvement in Penile Hemodynamics after Cessation of Smoking: Previous Results

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Urology. 2007; 69: 163-5

Objectives: To assess the chronologic relationship between the cessation of smoking and the restoration of erectile function. Smoking is associated with an increased risk of erectile dysfunction.
Methods: Twenty active smokers (20 to 40 cigarettes/day) affected by erectile dysfunction (International Index of Erectile Function 5-item score less than 21) were enrolled in the study. The mean age was 40 years. All the patients underwent penile color Doppler ultrasonography during the basic and dynamic phases (10 microg prostaglandin E1). A second Doppler evaluation was performed 24 to 36 hours after cessation of smoking. The peak systolic velocity (PSV) and end-diastolic velocity (EDV) were recorded. The PSV and EDV cutoff value was 30 cm/s and 5 cm/s, respectively.
Results: Of the 20 patients, 10 (50%) had normal PSV values but only 5 (25%) had normal EDV values at the baseline Doppler evaluation. All the patients (100%) had normal PSV values at the second penile Doppler evaluation after smoking withdrawal, and 17 (85%) also had normal EDV values. The average PSV was 40.1 and 50.3 cm/s ($P = 0.09$) and the mean EDV was 6.8 and 2.4 cm/s ($P < 0.01$) at the baseline penile Doppler examination and after smoking withdrawal, respectively.
Conclusions: Within 24 to 36 hours of the cessation of cigarette smoking, the color Doppler parameters demonstrated a significant improvement in EDV and a trend toward an increase in PSV. Additional clinical evaluation is required to further characterize the expeditious improvement in erectile function after the cessation of smoking.

Editorial Comment

This is a very impressive study, on which the authors evaluated prospectively 20 current smokers (20 to 40 cigarettes/day) with a mean of 7 years of smoking history. It was found that after 24 to 36 hours of smoking cessation, all 20 patients (100%) had normal peak systolic velocity values and 17 (85%) had normal end-diastolic velocity values at Doppler examination. This study is pioneer on the evaluation of short-term effects of the cessation of cigarette smoking in penile hemodynamics parameters. It is impressive how rapidly smoking cessation can improve penile hemodynamics.

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Effect of Extract of Phyllanthus Niruri on Crystal Deposition in Experimental Urolithiasis

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Phyllanthus niruri (Pn) is a plant that has been shown to interfere in the growth and aggregation of calcium oxalate (CaOx) crystals. In the present study we evaluated the effect of Pn on the preformed calculus induced by introduction of a CaOx seed into the bladder of male Wistar rats. Pn treatment (5 mg/rat/day) was initiated immediately or 30 days after CaOx seeding and thus in the presence of a preformed calculus. Animals were sacrificed 50 or 70 days after surgery. The resulting calculi were weighed and analyzed by X-ray diffraction, stereomicroscopy and scanning electronic microscopy. Precocious Pn treatment reduced the number (75%, $P < 0.05$) and the weight (65%, $P < 0.05$) of calculi that frequently exhibited a matrix-like material on its surface, compared to the untreated CaOx group. In contrast, Pn treatment in the presence of a preformed calculus did not prevent further calculus growth; rather, it caused an impressive modification in its appearance and texture. Calculi from Pn-treated animals had a smoother, homogeneous surface compared to the spicule shape of calculi found in the untreated CaOx group. XRD analysis revealed the precipitation of struvite crystals over the CaOx seed and Pn did not change the crystalline composition of the calculi. This suggests that Pn interfered with the arrangement of the precipitating crystals, probably by modifying the crystal-crystal and/or crystal-matrix interactions. Results suggest that Pn may have a therapeutic potential, since it was able to modify the shape and texture of calculi to a smoother and probably more fragile form, which could contribute to elimination and/or dissolution of calculi.

Editorial Comment

Phyllanthus niruri, is a plant used in Brazilian folk medicine. Its infusion tea is called “break-stone tea” and is widely used in Brazil for treatment of urolithiasis. The authors of this paper have been studying the effects of Phyllanthus niruri on urolithiasis at least for the last 10 years and have contributed a lot for the specialized literature (1-3).

In the present experimental study, the authors used a model of preformed calculus induced by introduction of a CaOx seed into the bladder of male Wistar rats. The authors elegantly demonstrated, by using X-ray diffraction, stereomicroscopy and scanning electronic microscopy, that precocious treatment with Phyllanthus niruri significantly reduced the number and the weight of calculi compared to the untreated CaOx seeding group. Also, on scanning electronic microscopy, in treated group, it was observed a homogeneous surface compared to the spicule shape of calculi found in the untreated CaOx group. These findings, together with previous findings from the same research group (1-3), suggest objectively that Phyllanthus niruri (“break-stone tea”) might have therapeutic potential for urolithiasis.

Interesting, in a recent published work from Italy, it was assessed the efficacy of Phyllanthus niruri after extracorporeal shock wave lithotripsy (ESWL) for renal stones (4). The authors evaluated prospectively 150 patients with renal stones that were as large as 25 mm and composed of calcium oxalate. All patients received 1 to 3 ESWL with Dornier Lithotriptor S. After treatment, 78 of 150 patients (52%) underwent therapy with Phyllanthus extract for at least 3 months (group 1). The other 72 of 150 patients (48%) were used as a control group (group 2). No significant difference in stone size between the 2 groups was found. Stone clearance was assessed after 30, 60, 90 and 180 days by abdominal X-ray and ultrasonography. Although no significant difference was found at the end point of the follow-up (180 days), for lower caliceal stones (56 patients) the stone-free rate was 93.7% in the treatment group and 70.8% in the control group ($p = 0.01$). The authors concluded that regular self-administration of Phyllanthus niruri after ESWL for renal stones results in an increased stone-free rate that appears statistically significant for lower caliceal location. Since ESWL for lower pole

stones is challenging and present poor results when compared to other locations stones (5), the efficacy and the lack of side effects make Phyllanthus niruri therapy suitable to improve overall outcomes after extracorporeal shock wave lithotripsy for lower pole stones.

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RECONSTRUCTIVE UROLOGY

Efficacy of the InVancetrade mark Male Sling in Men with Stress Urinary Incontinence

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Eur Urol. 2007; 51: 498-503

Objectives: To evaluate the efficacy and safety of the InVancetrade mark bulbourethral sling in male stress urinary incontinence.

Materials and Methods: Between June 2003 and April 2005, the InVancetrade mark bulbourethral sling was implanted into 50 patients with urinary incontinence after prostate surgery in 49 cases and pelvic trauma in 1 case. The patients were monitored and evaluated in a prospective manner (continence, tolerance, and satisfaction). The treatment was considered to be successful if the patient stopped wearing any kind of continence pad (patient cured) or only one pad per day (patient improved), with no de novo urinary disorders and without significant postvoid residual urine. Patient satisfaction with the procedure was assessed.

Results: After a median follow-up of 6 mo, 50% of patients were dry, 26% had improved, and 24% suffered treatment failure. The success rates for the patients with severe incontinence and those who had undergone radiation therapy were 50% and 25%, respectively. All patients who were dry or had improved were satisfied and presented no obstructive or irritative de novo urinary disorders. The overall success rate for the 51 procedures conducted was 74.5%. Six cases of transitory acute urine retention and six cases of persistent perineal pain were reported. Explantation was necessary because of suppuration of the sling in three patients and of a de novo irritative urinary disorder in one patient. No cases of pubic osteitis or urethral erosion were reported.

Conclusions: The InVancetrade mark bulbourethral sling procedure makes it possible to treat stress urinary incontinence after prostate surgery with satisfactory and lasting short-term results. Severe incontinence and a past history of pelvic radiation therapy seem to be factors contributing to the failure of this procedure.

Editorial Comment

Male urinary stress incontinence is often an aftereffect of a necessary prostate treatment. Such as transurethral resection of the benign enlarged prostate, radical prostatectomy or irradiation treatment for prostate cancer.

If iatrogenic caused incontinence does not disappear within a year under conservative treatment (pelvic floor exercise and the use of drugs like duloxetin) surgical approaches need to be discussed with the patient. Most of these patients are afraid of the implantation of an artificial sphincter hoping for a minimal invasive approach to treat their urinary stress incontinence.

Besides injectables (1), which demonstrate usually only a short term improvement, micro balloons and different kinds of urethral sling were introduced as a treatment option.

Fessi-Fehri et al. (2) extended their study of the use of a bow-anchored sling. Although the outcome seems to be almost identical in comparison to their first report with a follow-up of 3 months the enlarged groups of now 50 patients have a similar pleasing outcome of success even with a 6 months mean follow-up (1 - 22 months). It is remarkable that those who have now a follow–up of over 6 months 16 of 17 patients (94%) were dry or at least improved.

The authors mention a critical point: that those patients after radiotherapy or with the severe incontinence might still benefit most with an artificial sphincter. With the increased anatomical knowledge of the external urethral sphincter (3) and the satisfying published outcome of the TOT in female, the Advanced Male Sling System® of AMS might be the needed male version. It was just introduced to clinic but its primary data still needs to be confirmed. The attending urologist can offer today a cascade of treatment options, which might even further improve the outcome in a combination based on the cause of the urinary incontinence and its severity.

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The Hormonal Regulation of Cutaneous Wound Healing

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Clin Dermatol. 2007; 25: 56-62

Conditions of impaired wound healing in the elderly are associated with substantial morbidity and mortality and impose a significant financial burden upon the world's health services. The findings of a series of recent studies have served to highlight the contrasting contributions made by sex steroid hormones to the regulation of cutaneous repair processes. Although estrogens accelerate healing, the actions of the "male" sex hormones 5alpha-dihydrotestosterone and testosterone are primarily deleterious. The shift that occurs in the balance between serum estrogen and androgen levels as a normal feature of human aging may therefore have important consequences for fundamental tissue repair processes.

Editorial Comment

The paper outlines nicely the effect of sex hormones on wound healing. Topical and systemic estrogen applications have been shown to both increase acute healing and to prevent the development of a chronic wound status. A similar beneficial effect for wound healing was seen with the precursor of both androgenic and estrogenic effector molecules, dehydroepiandrosterone (DHEA). Both estrogens and DHEA dampen local inflammation and promote matrix deposition. The modulation of inflammatory responses by sex hormones is partially regulated by modulating macrophage function, which in turn leads to changes in TNF-alpha production, macrophage migration inhibitory factor secretion, and IL-6 expression.

In contrast, androgens seem to be negative regulators for wound healing suggesting that they retard repair processes and enhance the local inflammatory response. All surgeons including those dealing with flaps used in reconstructive urology are confronted with impaired wound healing possibly resulting in chronic wound healing states. Topical and systemic estrogen treatment as well as dehydroepiandrosterone may help to overcome some of the problems of flap or other reconstructive interventions and its sometimes peculiar problems regarding healing. This may be of particular importance in elderly patients were particularly estrogen and DHEA deficiency is thought to be the cause of age-related impaired wound healing. One should also think about using systemic hormonal replacement therapy in female patients prior to complex reconstructive surgery in order to reduce chronic wound problems.

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UROLOGICAL ONCOLOGY

Outcome of Surgery for Clinical Unilateral T3a Prostate Cancer: A Single-Institution Experience

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Eur Urol. 2007; 51: 121-8; discussion 128-9

Objectives: The optimal management of locally advanced prostate cancer (cT3) is still a matter of debate. The objective of this study is to present 10-year outcomes of radical prostatectomy (RP) in unilateral cT3a disease. Patients and Methods: Between 1987 and 2004, 2273 patients underwent RP at our institution. Two hundred and thirty-five (10.3%) patients were assessed as unilateral cT3a disease by digital rectal examination. Thirty-five patients who received neoadjuvant treatment before surgery were excluded from further analysis. Mean

follow-up was 70.6 months. Kaplan-Meier survival analysis was used to calculate the biochemical progression-free survival (BPFS), clinical progression-free survival (CPFS), cancer-specific survival (CSS), and overall survival (OS) rates. Cox uni- and multivariate regression analyses were used to identify predictive factors in BPFS and CPFS.
Results: Clinical overstaging (pT2) occurred in 23.5%. One hundred and twelve (56%) patients received adjuvant or salvage therapy. OS at 5 and 10 years was 95.9% and 77.0%, respectively, and CSS was 98.7% and 91.6%. BPFS at 5 and 10 years was 59.5% and 51.1%, respectively, and CPFS was 95.9% and 85.4%. Margin status was a significant independent predictor in BPFS; cancer volume was a significant independent predictor in CPFS.
Conclusions: Clinically advanced prostate cancer is still frequently overstaged. In a well-selected patient group with locally advanced prostate cancer, RP—with adjuvant or salvage treatment when needed—can yield very high long-term cancer control and survival rates. Margin status and cancer volume are significant predictors of outcome after RP.

Editorial Comment
The outcomes of clinically unilateral T3 cancer after surgical treatment are presented. In 22% the patients received adjuvant and in 34% they received salvage hormonal or radiation treatment.

Generally the outcomes are relatively good with only 10% cancer mortality after 10 years. The authors claim a high rate of overstaging in 23.5 % which leaves some doubt in the preoperative staging procedures, e.g. was TRUS performed preoperatively? Further aspects still might be debatable and are also addressed in the comments to this paper. At least one point of debate might be added. What happened to bilateral T3 patients and why were these excluded? The authors compare their results with radiotherapy results from historical trials but I do not remember this exclusion criterion in these radiotherapy trials.

In conclusion, both surgical and radiation therapy approaches seem justified in the treatment of locally advanced prostate cancer.

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Discrepancy between Clinical and Pathologic Stage: Impact on Prognosis after Radical Cystectomy

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Objectives: We compared clinical and pathologic staging in a large, contemporary, consecutive series of patients who were treated with radical cystectomy and pelvic lymphadenectomy, and determined the effect of stage discrepancy on outcomes.
Methods: We collected retrospective data from 778 consecutive patients with bladder transitional cell carcinoma who were treated with radical cystectomy and pelvic lymphadenectomy, and for whom the clinical and pathologic stage were available.

Results: Pathologic upstaging occurred in 42% of patients, and pathologic downstaging occurred in 22%. Forty percent of patients with non-muscle-invasive clinical stage had muscle-invasive pathologic stage. Thirty-six percent of patients with organ-confined clinical stage had non-organ-confined pathologic stage (> or = pT3N0 or pTanyN-positive). Patients with higher clinical stage were more likely to be upstaged to non-organ-confined disease ($p < 0.001$). Patients were stratified into three groups: pathologically upstaged, same clinical and pathologic stage, and pathologically downstaged. When adjusted for the effects of standard postoperative features, upstaged patients were at a significantly higher risk of disease recurrence and bladder cancer-specific death than patients who had the same pathologic and clinical stage, who in turn were at significantly higher risk than downstaged patients. This observation remained true within each clinical stage strata. Within each pathologic stage strata, clinical stage did not substratify into different risk groups.
Conclusions: Clinical to pathologic stage discrepancy is a relatively common finding after extirpative surgery for bladder cancer. Clinical outcomes after radical cystectomy are largely driven by pathologic stage. Better clinical staging is necessary to improve patient evaluation and management.

Editorial Comment
A large series of 778 patients with infiltrative bladder cancer undergoing radical cystectomy was retrospectively analysed and the impact of staging error calculated.

Most interestingly – and not debated much in this paper – is the fact that the percentage of correct peroperative staging declined (!) over the years with correct staging around 44% until 1994 and around 35% and lower from 1995 to 2003. What happened in these periods? Was there an institutional change or did surgeons not perform TURB as thoroughly as before?

Notably, downstaging moderately decreased from 26% to around 20% during these years whereas upstaging sharply increased (!) from around 28% to 43% and 49% in the later periods mentioned above.

The outcomes of pathologically staged cancer finally were in the expected range with rather good results showing roughly 80% bladder cancer specific survival in organ confined disease as compared to 37% in non organ-confined disease.

These data again seem to justify adjuvant chemotherapy in this high-risk group of patients.

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NEUROUROLOGY & FEMALE UROLOGY

Voiding Dysfunction Following Removal of Eroded Synthetic Mid Urethral Slings

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J Urol. 2006; 176: 1040-4

Purpose: Voiding dysfunction following genitourinary erosion of synthetic mid urethral slings is not clearly reported. We investigated the incidence of voiding dysfunction in patients following sling excision due to vaginal, urethral or intravesical mesh erosion.

Materials and Methods: Retrospective review identified 19 patients with genitourinary erosion of polypropylene mesh slings. Comprehensive urological evaluation was performed in all patients, and perioperative and postoperative data were analyzed. Voiding dysfunction was defined as refractory storage symptoms, emptying symptoms and pelvic pain. All subsequent medical and surgical interventions were recorded.
Results: In 19 patients a total of 11 vaginal, 7 intravesical and 5 urethral erosions occurred. Mean patient age was 52 years (range 32 to 69) and average followup was 8.4 months (range 3 to 34). Average time from symptom onset to sling removal was 10.1 months (range 1.5 to 38). Of the 19 patients 14 (74%) presented with multiple symptoms. Symptoms varied, including refractory pain, recurrent infections and bladder storage/emptying dysfunction. Urodynamic studies were abnormal preoperatively and postoperatively in 9 of 13 (69%) and 4 of 6 patients (67%), respectively. Following surgery lower urinary tract symptoms resolved completely in only 4 of the 19 patients (21%). Stress incontinence recurred in 8 of the 19 patients (42%). Five patients underwent simultaneous pubovaginal sling, of whom none had recurrent stress urinary incontinence. Only 9 patients (47%) considered themselves dry with no pads following surgery. Four patients required further surgery for refractory voiding symptoms.
Conclusions: Voiding dysfunction is not an uncommon finding after sling excision in the setting of genitourinary erosion. It may cause additional patient morbidity.

Editorial Comment

The authors give a sobering report on their experience with voiding dysfunction after erosion of synthetic mid-urethral slings. Their study included vaginal, vesical, and urethral erosions. The patient population was relatively young (average age 52) with average follow-up after intervention being less than 1 year. This report of persistent voiding dysfunction following removal of the eroded material as well as the high rate of incontinence after reparative surgery can be deflating to a treating physician. The incidence of recurrent incontinence is somewhat higher than that reported for transobturator suburethral tape erosion and subsequent explantation (1). The authors point out that in their experience, preoperative urodynamics prior to the removal of the erosion may be of marked value. In addition, it is noted that the presentations of tape erosion may be quite variable necessitating a high index of suspicion and a careful evaluation for appropriate diagnosis. One may heed the authors' advice that aggressive mesh removal for vaginal extrusion is not needed in all situations and that surgical judgment should be exercised. They also do debate the need for synchronous placement of pubovaginal sling at the time of mesh removal to prevent recurrent stress urinary incontinence.

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Objective and Subjective Cure Rates after Trans-obturator Tape (OBTAPE) Treatment of Female Urinary Incontinence

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Objective: To evaluate the safety and efficacy of a thermally bonded nonwoven polypropylene mesh in a transobturator suburethral tape procedure (OBTAPE), Mentor-Porges, Le Plessis Robinson, France) for women with stress urinary incontinence.
Methods: Between January 2003 and January 2005, 129 consecutive women (mean age 57.2 years) underwent OBTAPE in two academic centers. All the patients had stress urinary incontinence preoperatively. Detrusor instability was ruled out by cystometry. The women were evaluated 1, 6 and 12 months postoperatively. The objective cure rate was evaluated by clinical examination and the subjective cure rate was assessed using the KHQ and BFLUTS questionnaire.
Results: Mean follow-up was 17.2 +/- 4.7 months (range 4 to 28 months). The objective and subjective cure rates were respectively 89.9% and 77.5%. Most of the patients received general anesthesia (85.3%). Urinary retention was observed in two women (1.5%), necessitating tape adjustment. Voiding difficulties were observed in 7 cases (5.4%) necessitating intermittent self-catheterization for 4.2 +/- 2.4 days (range 1 to 7 days). Seven patients developed vaginal erosion (one with vaginal extrusion, and two with an obturator abscess). Complete mesh removal was necessary in 6 patients, four of whom had recurrent stress urinary incontinence.
Conclusions: Our results suggest that the OBTAPE is an effective treatment for women with stress urinary incontinence. However, vaginal mesh erosion occurred in 6.2% of women, and this implies the need for careful follow-up.

Editorial Comment

The authors reviewed the effectiveness of the transobturator procedure using the OBtape® material. The authors found overall cure rates that were very competitive with other suburethral sling procedures but noted a relatively high erosion rate.

This publication evaluated a fairly young patient population (average age 57.1) and followed the patients for a minimum of six months. Objective cure of stress incontinence was judged on fairly strict criteria: both clinical and urodynamic examinations were utilized though it is unclear when the urodynamic examinations were performed postoperatively. In addition to the objection evaluation, the patients were asked to judge their surgical result on a subjective basis. Performance of the operation was very efficient with a mean operating time being a little less than 10 minutes. Objective cure rates were approximately 90% with subjective cure rates being somewhat less at 78%. Of interest is that two-thirds of the patients had resolution of their preoperative urge symptoms while one-third has persistence of same. This mirrors closely that reported for other surgical procedures (1). That this operation usually necessitates less vaginal dissection opposes the argument that the urge component may be lessened by incidental neural ablation occurring during the vaginal dissection (2). This high erosion rate using the OBtape® has been reported by other surgeons leading to the discontinuation of use of this material; in response, there has been a progression to new tapes such as Aris™ that is knitted and has a larger pore size of 550 x 170 microns. Other authors have stated that erosion may be material based and not really a technical problem (3). This paper does reinforce the ease and efficacy of this procedure.

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PEDIATRIC UROLOGY

Natural History of Patients With Multicystic Dysplastic Kidney-What Followup Is Needed?

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J Urol. 2006; 176: 1607-11

Purpose: Most clinicians recommend followup with annual ultrasound for patients with multicystic dysplastic kidney. The aim of this study was to determine whether followup ultrasound provides any clinical benefit.
Materials and Methods: We retrospectively reviewed the charts of 73 patients who were diagnosed with multicystic dysplastic kidney between October 1991 and August 2005. Data were analyzed with respect to patient characteristics and followup information.
Results: We identified 61 patients (43 boys and 18 girls) with adequate followup. A total of 49 patients (80%) were diagnosed prenatally and 12 (20%) postnatally. Associated urological anomalies were noted in 16 patients (26%). Median followup was 2.6 years (range 6 months to 37.5 years). Ultrasound examinations showed complete involution in 25 patients (41%) and partial regression in 18 (30%). The size of the multicystic dysplastic kidney increased in 1 patient (1.6%) and was unchanged in 17 (28%) without any pathological manifestations. Median age at complete involution was 2.1 years (range 36 days to 13.7 years). Patients with contralateral compensatory hypertrophy had more rapid complete involution. Urinary tract infection developed in 6 patients, of whom 1 was ultimately found to have reflux and 1 had ureteropelvic junction obstruction.
Conclusions: In our patients with unilateral multicystic dysplastic kidney ultrasound provided little clinically important information. Our data and a review of the literature suggest that once the diagnosis is made, no urological followup is needed. The primary care provider should monitor patients with multicystic dysplastic kidney for hypertension, abdominal mass and urinary tract infection.

Editorial Comment
This is an interesting review of 73 patients between 1991 and 2005 diagnosed with multicystic kidney disease. Of these 61 patients, 43 boys and 18 girls, had follow up with ultrasound postnatally and VCUG or renal scan.

Median age at diagnosis was 1.5 years and median follow up was 2.6 years with the median number of ultrasounds per patient was 4. Associated urologic anomalies were found in 16 patients. Most were vesicoureteral reflux. Four had ureteroceles and 1 had a contralateral ureteropelvic junction obstruction. The authors evaluated their patients thoroughly for hypertension and development of kidney tumors and none of their patients developed either. Only one of their patients had an increase in size in the multicystic kidney. They conclude that multicystic dysplastic kidney patients should have a postnatal ultrasound and VCUG and only patients with associated urologic anomalies should have continual follow up.

This data seems to mirror that which is seen in the medical literature and there is very little evidence that multicystic dysplastic kidney patients will develop hypertension at any increased rate or develop a kidney tumor. Many have recommended that the ultrasounds be done at least until age 8 or even puberty. In this study, the actual follow up is relatively short but their lack of findings seems to validate their conclusions that routine imaging is unnecessary.

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Impact of Patient Age on Distal Hypospadias Repair: A Surgical Perspective

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Objectives: To assess whether the age at which the initial hypospadias repair is performed influences the complication rate of hypospadias repair.
Methods: The records of 325 consecutive patients who underwent initial hypospadias repair were reviewed. The patients with glanular and coronal hypospadias underwent repair with either meatoplasty and glanuloplasty or a glans approximation procedure. Patients with subcoronal hypospadias and penile hypospadias underwent repair with tubularized incised plate urethroplasty. The patients were divided into 6-month age groups, and the complication rates were analyzed by age group using the chi-square test.
Results: A total of 325 hypospadias repairs were performed from January 1999 to January 2005 by a single surgeon. Of the 325 cases, 194 tubularized incised plate procedures were performed, 69 meatoplasty and glanuloplasty procedures were performed, and 53 glans approximation procedures were performed. Nine tubularized island flap urethroplasties performed for penoscrotal hypospadias were excluded because we did not perform a significant number of proximal urethroplasties. Nineteen patients (6.0%) developed urethrocutaneous fistulas and six (1.9%) demonstrated dehiscence. Overall, 2 patients (2.2%) who underwent surgical repair within the first 6 months of age developed complications compared with 23 patients (10.3%) who underwent initial hypospadias repair when they were older than 6 months of age ($P = 0.006$).
Conclusions: Tubularized incised plate, meatoplasty and glanuloplasty, and glans approximation urethroplasty are all excellent options for the surgical correction of hypospadias in the appropriately selected patient. The results of our study have indicated that complications are minimized when hypospadias repair is performed when the patient is 4 to 6 months of age.

Editorial Comment

This article reviews 316 cases of distal hypospadias repair from 1999-2005. Patients underwent a tubularized incised plate urethroplasty, meatal advancement glanuloplasty or a glans approximation procedure, and were stratified into categories. The first category was 4-6 months of age and then after that, six month intervals, and their complications were compared.

Only two complications occurred in the 92 patients done between 4-6 months of age. 15 complications occurred between 7 and 12 months and two between 13 and 18 months. There was a statistical difference between complications in the 4-6 month group and any group thereafter. This was especially obvious in the tubularized incised plate urethroplasty group.

Currently for many reasons, the American Academy of Pediatrics has recommended genital surgery be performed between 6 and 12 months of age. This article brings into question whether this recommendation should be pushed a few months earlier for the benefits of the repair. As pediatric anesthesia has made great progress in the last couple of decades, the risk to infants is much less and similar during each of these age groups. This a piece of information that is interesting to consider, however it is difficult to understand on a physiologic basis, how a few months of age would make a difference in the healing process and complications of the patients.

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